

NIAS NEWS



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JANUARY – APRIL 2005





Editors' Note

This volume of NIAS NEWS marks the beginning of the fourteenth year of its publication. We could not, unfortunately, publish the first issue of the volume in January earlier this year due to unavoidable reasons, and this particular issue, therefore, represents a combination issue for January and April. Our sincere apologies for this lapse. Over the years we have introduced various changes in the contents and format of the newsletter in an effort to make it more informative and interesting. We have, for example, begun to incorporate small abstracts and reviews of some of the lectures and other programmes organised by the Institute to give the readers an idea about the eclectic nature of the academic environment that NIAS has always represented. We have planned other innovative changes in the newsletter as well and hope to introduce them in the forthcoming issues of NIAS NEWS.

The basic aims and purpose of the newsletter, however, continue to remain the same – that of providing you glimpses of the activities being carried out at the Institute. What will also not change, we hope, is the continued support that we have been receiving from our readers in the form of valuable suggestions and comments on how we can improve NIAS NEWS further – please do keep writing in!

Anindya Sinha, Hamsa Kalyani & A Deva Raju,
Editors, April 2005



From the Director's Desk



First of all, my greetings to the NIAS Community!. The last one year of my association with NIAS has been both eventful and satisfying. The new demands that the Institute placed on all of us in this period of one year were not only challenging, but also called for bringing to bear the best in each one of us. These encompassed, among other things, restructuring the academic system of the Institute, improving the finances, initiating a program of doctoral students, getting support for new projects and programs as well as taking the first step for building the much needed faculty block. These developments, owe much to the extraordinary role that the faculty and other members of staff of NIAS played, bringing in the best of their creative thinking and professionalism. I am sure these steps will set the direction and pace of the Institute in the coming years.

Induction of new students for carrying out research leading to Ph.D degree through a formal mechanism had an encouraging beginning. The first batch of eight students, whose background is as varied as science, mathematics, sociology and humanities, have been made to go through a preparatory programme involving a comprehensive foundation course, encompassing topics that range from metaphysics, mathematics modelling, gender studies, Indian philosophy to various aspects of research methodology. In the coming weeks, the follow-up to this foundation course would include courses specially focused on research methodology, statistical analysis and field-based studies. I am keenly interested to see this initiative to be a harbinger of a new generation of interdisciplinary scholars capable of bringing laurels to themselves and to the Institute

I am happy to announce that the Sir Dorabji Tata Trust, through a generous grant of Rs.3 Crores has enabled the Institute to undertake the construction of the faculty block. This is a part of the Sir Dorabji Tata Trust plans to support worthwhile initiatives all across the country to commemorate the birth centenary of Bharata Ratna, late Mr. J R D Tata and death centenary of late Mr. J N Tata. The work on the building will start shortly and is expected to be ready for occupation by the middle of next year. The entire NIAS community expresses its deepest sense of gratitude to Sir Dorabji Tata Trust, specially to its distinguished Chairman, Mr. Ratan N. Tata for this gesture. We also would like to record our sincere thanks to Dr. J J Irani and Prof. M S Swaminathan, for their personal interest to support the cause of NIAS.

We have been also exploring with different agencies, the possibility of raising suitable grants to strengthen the finances of the Institute. I am glad to inform that we have succeeded in getting Rs.10 Crores, as a one time grant from the Department of Science and Technology to support the various activities of the institute. Here, I should particularly express our grateful thanks to the Secretary of the Department of Science and Technology, Prof. V S Ramamurthy for his unstinted support in ensuring the availability of the grant. Further, his two colleagues, Dr. V Rao Aiyagari and Dr. B Hari Gopal were exceptional in their efforts to follow up the processing of this grant over several months and our deep appreciation for their commitment. The availability of this grant should go a long way in strengthening the ambience at NIAS for research, getting eminent academicians for short periods, organizing specialized seminars and workshops and many similar endeavours.

On the research front there were a few notable developments. One such example is the work of Dr. Anindya Sinha and his team. They have successfully identified a hitherto unknown primate, the Arunachal *Macaca munzula* in

northeastern India. A long field study of this newly discovered Macaque in the western districts of Tawang and West Kameng in the State of Arunachal Pradesh is planned.



As part of the work pertaining to the International Strategic Studies group, one of the highlights during this period was a discussion organized with the Asian Development Society on 12 February 2005. The central theme of the dialogue was "the Impact of Indo-ASEAN Cooperation on the Emerging Security Scenario in Asia.

With respect to various courses conducted by NIAS during this period, two need special mention. The first one is the 19th NIAS Course for Senior Executives entitled **Excellence in Leadership**. The course, inaugurated by Dr. Anji Reddy, Chairman of the Dr. Reddy's Labs, was attended by participants drawn from both private and public sector organizations. We had several eminent speakers addressing the participants. Among others, this included Capt. G R Gopinath of Air Deccan, Dr. V Sumantran of Tata Motors Ltd, Dr. Claude Nicollier, Dr. Bob Hoekstra of Philips Innovation Centre, Dr. Narendra Pani of Economic Times, Dr. Meenakshi Sundaram of NIAS and many others. Coordinated by Dr. Sangeetha Menon, the response to the course which included besides lectures formal discussions, interactive sessions and semi formal sessions was beyond expectations.

The 8th course for College and University teachers was held between February 10 and 2 March, 2005 and was jointly sponsored by University Grants Commission, New Delhi, Indian Space Research Organization, Bangalore and Jawaharlal Nehru Centre for Advanced Scientific Research, Bangalore. The theme of the course was **Research and Development in India: Current Frontiers**. The course which had 26 participants from different parts of the country and covering different disciplines

provided a unique opportunity for the teachers to interact with distinguished speakers from different disciplines. Such a course could considerably help to enhance the ability of the participants to adopt inter-disciplinary approach to conceptualize and solve complex problems facing the country. The Course coordinated by Dr. B K Anitha and Dr. Anindya Sinha was very well received by the participants.

As a part of celebrating the birth centenary of our founder, Mr. J.R.D. Tata, a book titled **India's Legendary Wootz Steel** by Dr.Sharada Srinivasan and Prof.S.Ranganathan was released by Mr.B.Muthuraman, Managing Director of Tata Steel on November 26, 2004. This programme was organized jointly by the Indian Institute of Science (IISc.) and the National Institute of Advanced Studies (NIAS). Prof.H.P.Khincha of IISc paid tributes to Mr. J N Tata, the founder of IISc and whose death centenary is also being observed this year. NIAS paid its tribute to Mr. J R D Tata. The book is aimed at inciting interest among young students for scientific studies of materials.

During the last six months, we had several distinguished visitors visiting NIAS for discussions and lectures. Among them, we had astronaut Claude Niccollier, talking on future of Human Space Flights on 27 January, 2005. On February 7, 2005, Sir David King, the Chief Scientific Adviser to the UK Government, spoke on Climate Change. He characterized it as one of the greatest problems facing the government today (a greater threat than terrorism) and linked the drought in India in 2003 to the combined impacts of Climate Change and El Nino. He called for increased capacity building in science and international collaboration in tackling this problem. We also had teams led by US Senator Jeff Bingaman and Chancellor Tomlinson of the University of California at Merced visiting us during this period. Both teams had very useful exchanges with NIAS faculty.

I am sure, the coming months are expected to be even more eventful for NIAS. I look forward to working with all of you, the NIAS community, in translating to reality our shared vision of NIAS of tomorrow.



K Kasturirangan



Research Programmes

The principal areas of research that faculty members of the Institute are currently involved in include consciousness studies; conservation biology; education; energy policy and renewable energy; environmental toxicology; epigraphy; gender studies; history and philosophy of science; Indian history; international and strategic studies; mathematical modelling in non-traditional areas; primate behavioural ecology, communication and cognition; science and technology policy; sociology and social anthropology; and theory of numbers.

More specifically, the International Strategic and Security Studies Programme has completed a project on **An assessment of Pakistan's missile programme and its implications for India**. A detailed study of the Pakistani missile programme was undertaken as a competence-building project. The study used publicly available information, images and data on the Pakistani missile programme to make an independent assessment of Pakistan's missile capabilities. Measurements on images were

used as a basis for predicting technical characteristics of the missiles. These were used as inputs into models that predict range and other missile parameters. The results were compared with publicly available information on the Pakistani programme. In addition, the study also addressed organisational issues and the implications of the emerging Pakistani capabilities for potential Indian strategies. An assessment of Pakistani capabilities in the technologies that are critical for missile development was also addressed as a part of the study. The first draft of the report is complete. After a critical review, it will be brought out as a report / publication of NIAS.

N Shantha Mohan of the School of Social Sciences has completed the project on **Use and misuse of Section 498A of the Indian Penal Code**, supported by the Centre for Social Research, New Delhi. This study is part of the national study on this issue being carried out in the four Indian states of Rajasthan, West Bengal, Delhi and Karnataka.

Sundar Sarukkai of the School of Humanities has completed his project on the PHISPC fellowship in November 2004. The project was to support the writing of a book detailing the relevance of Indian philosophy to the philosophy of science. The book has been completed and the process towards publication has begun.

Anindya Sinha of the School of Natural Sciences and Engineering has just received a research grant from the Wildlife Conservation Society – India Program, Bangalore, for his exploratory project entitled **Behavioural ecology and conservation of macaques in the fragmented lowland tropical forests of Assam, north-eastern India**. This work, which will also involve **Narayan Sharma**, one of the current doctoral students under the NIAS-MAHE Doctoral Programme, will be the first project to explore the ecological and behavioural dynamics of a remarkable primate community, consisting of seven species and including four



macaques – the Assamese macaque, pigtailed macaque, rhesus macaque and the stumptailed macaque – in degraded evergreen forest fragments of upper Assam. Although this ecosystem has the highest primate biomass density in India and perhaps one of the highest in the world, comparable to Amazonia and some parts of Africa, most of these fragments today stand on the brink of extinction due to unabated human activities while continuing to remain virtually unstudied and unknown.

In collaboration with Charudutt Mishra of the Nature Conservation Foundation in Mysore, **Anindya Sinha** has also received a grant from the Rufford Maurice Laing Foundation, London, UK for a project entitled **Ecology and conservation of a newly discovered primate, the Arunachal macaque *Macaca munzala*, in northeastern India**. This research grant, for the period from November 2004 to October 2005, marks the beginning of a long-term field study of the newly discovered Arunachal macaque in the western districts of Tawang and West Kameng in the state of Arunachal Pradesh.

A research project on **J B S Haldane's Indian period** is being carried out by **Veena Rao** since October 2003. It aims to explore Haldane's stay in India and the two-way influence of the stay. In particular, the study addresses issues including why Haldane chose to settle down in India in later years, what happened to his friendship with Prof P C Mahalanobis, whether Haldane's presence made any difference to Indian science, how Haldane utilised his expertise, or what became of the Journal of Genetics after Haldane brought it to India. The investigator has gathered information from several people who had known J B S Haldane in India and abroad. She now plans to examine the archival collections abroad and meet relatives and associates of Haldane in Great Britain and has been selected under INSA-Royal Society Exchange Programme to visit UK for this purpose.



Publications

BOOKS AND MONOGRAPHS

Srinivasan, S and Ranganathan, S. 2004. *India's Legendary Wootz Steel: An Advanced Material of the Ancient World*. Tata Steel, Jamshedpur

This book tells the compelling tale of wootz, a high-grade steel made in India more than a thousand years before comparable steel came into vogue in the West. Thus it has been hailed as the greatest metallurgical achievement of all mankind in antiquity. European travellers in India in the seventeenth century observed cakes of steel being made in southern India in Andhra Pradesh, Karnataka and Tamil Nadu, known in the local languages as 'ukku', which the travellers heard as wootz. Wootz was novel because it was an ultra-high carbon steel with 1.5% carbon, whereas previously Europe had only been familiar with low-carbon steel. It was especially sought after in west Asia to make a naturally wavy-patterned sword blade, the 'Damascus blade', which was as beautiful as it was devastating. Wootz became synonymous with Damascus steel, Bulat and Ondanique, derived from the Arab term 'Hinduwani' meaning Indian steel. Perhaps no material of antiquity has been as much feted over the ages through literature, films, and in recent times the internet, as wootz has been. The celebrated writer Walter Scott in his book, 'The Talisman', memorably fictionalised an encounter going back to the twelfth century Crusades between King Saladin of Egypt and King Richard of England where Saladin sliced a pillow with his superior Damascus blade. Apart from exploring the historical significance of wootz, the book aims to capture its special metallurgical significance. Wootz steel played a pivotal role in developments in nineteenth century metallurgy with no less a scientist than Michael Faraday, renowned inventor of electricity, having studied it. Even in the realm of modern metallurgy, wootz steel has attracted



interest as an advanced material with interesting properties in the fields of superplasticity and nanomaterials. Interesting comparisons have been made with the pattern-welded Samurai swords. The book aims to capture the imagination of the youth and lay people alike, using an ancient material to kindle interest in modern materials science, and hence, gives an enchanting view into the links between metals, materials and mankind from the past into the present. Whereas several skilled traditional Indian technologies declined in the colonial period, India emerged once again as a major industrial producer of steel under the dynamic vision of J N Tata and J R D Tata. This book is part of the commemoration of the Twin Centenary celebrations of the Tatas, and was released on November 26.

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A FILM ON NIAS

Doordarshan has recently made a documentary film on NIAS. Written by Dr Vanaja S Kumar (Professor of Sociology, BMS College for Women, Bangalore) in Kannada and English, it has been produced by Mr Gunasheelan of DD Bangalore under the guidance of Mr G M Shirahatti, earlier Director, DD Bangalore. Presented by Ms Jhanavi Gurjer, the film was telecast by DD Bangalore on the National Network.

Hamsa Kalyani

DOCTORAL PROGRAMME IN NIAS

Though a few students had obtained their Ph.D by working at NIAS, there was no regular Ph.D programme as such in NIAS. It was felt by the Director and the senior faculty of the Institute that the interdisciplinary expertise available at NIAS could be very profitably utilized for developing a cadre of young students who could involve themselves in interdisciplinary research by opening up a regular Ph.D programme in NIAS. Accordingly a Doctoral programme has been initiated at NIAS. With support from the Department of Science and Technology and the Indian Space Research Organisation, eight students have been recruited so far. The Manipal Academy of Science (MAHE) and the University of Mysore have recognized NIAS as a centre of research for the award of Ph.D degree. For more information please contact bvs@nias.iisc.ernet.in

B V Sreekantan



Honours and Awards and Appointments for NIAS Faculty



H K Anasuya Devi

Nominated as an Associate Member of the Institution of Electronics and Telecommunication Engineers, New Delhi, from March 2005

R L Kapur

Appointed a Member of the Society of the Indian Institute of Advanced Studies, Shimla, with effect from November 26, 2004 till April 10, 2005

K Kasturirangan

Conferred the Alan D Emil Memorial Award by the International Astronautical Federation (IAF) at the 55th International Astronautical Congress, Vancouver, Canada, October 8

Conferred the Prof M N Saha Memorial Lecture Medal of the National Academy of Sciences of India, Jaipur, December 4

Conferred the Life Time Contribution Award in Engineering for 2004 by the Indian National Academy of Engineering, New Delhi, December 11

Elected President of the Indian National Academy of Engineering for 2005-2006

Arvind Kumar

Invited to be National Scholar-in-Residence at the Department of International Studies, Stella Maris College, Chennai, November 23-26

Nominated as a Member of the Advisory Board, Defence Journal, Mumbai

Invited to be an APISAIDSS Fellow at the Institute of Defence and Strategic Studies, Nanyang Technological University, Singapore, March 6-31

Appointed as a resource person for setting Question Paper for MA (Politics and International Studies) and Examiner for MA and MPhil degrees by Pondicherry Central University, Pondicherry

N Shantha Mohan

Nominated by the ISRO Satellite Centre of the Indian Space Research Organisation (ISRO), Bangalore to serve as a member of the Committee for Sexual Harassment of Women at the Workplace with effect from March 2005

S Ranganathan

Appointed Senior Homi Bhabha Fellow by the Homi Bhabha Fellowships Council with effect from January 1, 2005 for a period of two years

Padma M Sarangapani

Nominated as a Member of the Steering Group to review the National Curriculum Framework for School Education 2000 by the National Council of Educational Research and Training (NCERT) and the Ministry of Human Resource Development, New Delhi

Sundar Sarukkai

Guest editor for a special section on Mathematics in the journal *Current Science*, Vol 88, No 3, February 2005

Invited to be an Editorial Advisor for an International Publication Series on Advanced Studies in Mathematics and Logic, Italy

Anindya Sinha

Nominated as a Resource Person, Indian Biology Olympiad Team, Homi Bhabha Centre for Science Education, Mumbai, with effect from October 2004

Selected as a Member of the International Jury to accompany the Indian team to the International Biology Olympiad, to be held in Beijing, China, in July 2005



B V Sreekantan

Awarded the Sir M Visvesvaraya Senior Scientist State Award by the Government of Karnataka for the year 2002

COURSES TAUGHT BY NIAS FACULTY

H K Anasuya Devi

Taught a course on Intelligence Systems and Computing Methods at the Proficiency Continuing Education Programme, Indian Institute of Science, Bangalore, August – December 2004

Currently teaching a course on AI Systems and its Developments” at the Proficiency Continuing Education Programme, Indian Institute of Science, Bangalore, January – May 2005

Sindhu Radhakrishna

Taught a five-lecture course in Primatology at the Postgraduate Program in Wildlife Biology and Conservation, organised by the Wildlife Conservation Society – India Program, NIAS, National Centre for Biological Sciences and the Manipal Academy of Higher Education, in September 2004

Anindya Sinha

Taught a six-week theoretical and field course, consisting of a series of twenty lectures, demonstration of field techniques, project assignments and several interactive sessions in Behavioural Ecology for the Postgraduate Programme in Wildlife Biology and

Conservation, organised by the Wildlife Conservation Society – India Program, NIAS, National Centre for Biological Sciences and the Manipal Academy of Higher Education, in January – February 2005



Important Events

Complementing its research programmes, NIAS organises a variety of seminars, workshops, and academic courses each year. Some of the important events that were organised during the period from October to December 2004 included:

CIIS – NIAS MEETING ON SECURITY ISSUES AND SINO-INDIAN RELATIONS

November 15

The National Security Studies Programme of NIAS recently organised an interactive session with the representatives from the China Institute of International Studies, Beijing. The purpose of the meeting was to exchange views and examine areas for possible future cooperation. The Chinese team stated that they were working on a book on India as a rising power in the south Asian region, and the discussions in India were related to this project. Mr Zheng Ruixiang, a former, Consul General in Mumbai and a senior diplomat, made a presentation on "China's security policy", while Arvind Kumar of NIAS made a presentation on "India's nuclear doctrine". Wide-ranging discussions were held on international security issues and matters relating to Sino-Indian relations during this meeting.

S Chandrashekar and Arvind Kumar

FIRST PROGRAMME ON MULTI-DISCIPLINARY PERSPECTIVES ON SCIENCE AND TECHNOLOGY



November 15-27

With support from the Department of Science and Technology (DST), Government of India, NIAS organised this first programme for a very select group of senior scientist-administrators from various scientific organisations in the country. As in the case of the ISRO Courses, the purpose of this programme was to provide the orientation and planning skills needed by science administrators, and to offer views of the broader scientific, economic, social and cultural milieu in which the Indian scientific enterprise could develop in future.

The eighteen course participants came from a variety of scientific organisations in the country. Professor Goverdhan Mehta, Director, Indian Institute of Science, Bangalore, inaugurated the course and also delivered a presentation on "Building science and technology capacity in this century". The presentations in the course were from several disciplines – science and technology, social sciences, culture and the arts. More specifically, the topics that were covered at this course included science and technology policy and capacity building, development planning in India, climate change, conservation of natural resources, ethics in public administration, philosophy of science and mathematics, embryology and molecular biology, leadership issues, politics and bureaucracy, gender issues, ethics in public administration and modern Indian literature.

Among the highlights of the programme, as identified by the participants, were a visit to the Infosys campus, presentations by Professors Narasimha, Mehta and Jhunjhunwala, an interactive session with Dr. Kasturirangan, and a visit to Orange County, Kodagu, where a part of the programme was held. Professor V S Ramamurthy delivered the valedictory address

and also heard feedback about the course from the participants. DST expects NIAS to conduct more such programmes in the future.

Dilip Ahuja

DONATION TO THE PRINCIPAL S R GROVER LIBRARY

November 27

Prof. R Narasimhan, CMC National Fellow in Information Technology, Bangalore, has made a gift of three hundred books to the Principal S R Grover Library of NIAS. On November 27, as the concluding part of the First NIAS-DST Course for Senior Scientist-Administrators on Multi-disciplinary Perspectives on Science and Technology, a facilitation function was held, during which Dr. K Kasturirangan, Director of NIAS and Prof. B V Sreekantan, Chairman of the Library Committee thanked Prof. Narasimhan for this valuable gift.

Hamsa Kalyani

COURSE ON SYSTEMS ENGINEERING

December 22-27

This course on Systems Engineering for the first batches of entry-level scientists of the DRDO were organised at the Institute of Armament Technology in Pune.

S Rajagopal

NINETEENTH NIAS COURSE FOR SENIOR EXECUTIVES

January 23-29

The 19th NIAS Course for Senior Executives, which had as its immediate theme **Excellence in**



Leadership, was held from January 23-29 in NIAS. This course, with a more general theme of *An Integrated Approach to Knowledge and Information* has its history going back to the initiation of this Institute; it resulted from the vision that the late Mr. J R D Tata nurtured for the top administrators, decision-makers, leaders and pioneers of the country, who would require to use rapidly changing knowledge tools to take effective decisions in their own environment.

This course was inaugurated by Dr K Anji Reddy, Chairman, Dr Reddy's Labs Ltd, while the valedictory address on **Leadership in 21st Century India - Opportunities and Challenges** was delivered by Dr Jayprakash Narayan, Chief Co-ordinator, Lok Satta. Twenty four participants, representing a wide range of organisations and varied areas of work, attended the course. The inaugural evening of the course concluded with a dance recital - the *Mahabharatam* - by Sri Sridhar and Smt Anuradha Sridhar.

The programme for the course was designed so as to expose the participants to the best in leadership that India can offer - related not only to organisational success but also in terms of pioneering projects, innovations and entrepreneurship.

The speakers at the course included Mr Subroto Bagchi, Chief Operating Officer, MindTree Consulting Pvt Ltd; Capt G R Gopinath, Managing Director, Deccan Airways; Dr Narendar Pani, Senior Editor, The Economic Times; Dr V Sumantran, Executive Director (PCBU & ERC), Tata Motors Ltd; Dr K Kasturirangan Director, National Institute of Advanced Studies; Dr Brinda Sitaram, Consultant Psycho-oncologist, Curie Centre of Oncology; Dr Claude Nicollier, Golden Jubilee Distinguished Professor, Raman Research Institute; Dr S S Meenakshisundaram IAS, Visiting Professor, NIAS; Ms Ranjani Srikumar IAS, Principal Secretary, Dept of

Women and Child Development, Government of Karnataka; Dr Rohini Godbole, Centre for Theoretical Studies, Indian Institute of Science; Ms Sakuntala Narasimhan, well-known journalist; Dr Bob Hoekstra, Chief Executive Officer, Philips Software Centre Private Ltd. It was intended that such a multidisciplinary representation of speakers and leaders would initiate a holistic discussion on the course theme among the participants.

Dr Sangeetha Menon was the Coordinator of this year's course, while Prof BV Sreekantan, Prof Dilip Ahuja, Dr Sundar Sarukkai, Dr Shantha Mohan and Dr Carol Upadhyia served as Observers cum Moderators for the course.

Sangeetha Menon

EIGHTH NIAS COURSE FOR UNIVERSITY AND COLLEGE TEACHERS

February 10-March 2

The Eighth NIAS Course on "An Integrated Approach to Knowledge and Information" for university and college teachers, co-sponsored with the University Grants Commission (UGC), New Delhi, the Indian Space Research Organization (ISRO), Bangalore and the Jawaharlal Nehru Centre for Advanced Scientific Research (JNCASR), Bangalore, was held from February 10 to March 2 at the NIAS Campus in Bangalore.

The primary objective of this course, as in the previous years, was to invite university and college teachers of varied disciplines from all across the country and expose them to new advances in various fields of knowledge, put them in touch with India's socio-cultural roots and engage them in discussions on major problems facing the country. This was achieved through lectures, panel discussions, participatory dialogues, group projects and educational tours.



The theme that had been chosen for this year's course was **Research and Development in India: Current Frontiers**. We accordingly designed the programme such that it would review the history, document the progress and project the future of our nation's research and development in different areas of endeavour, ranging from the natural sciences through the humanities and social sciences to the literary and the performing arts.

The course was inaugurated on the morning of February 10 by Dr K Kasturirangan, Director, NIAS, who delivered the inaugural address on **India's Space Programme: The Challenges Ahead**. This was followed by an interesting session when the participants expressed their frank views on the problems of scientific research in our country; Dr Kasturirangan responded to these views with equal candour.

The course consisted of a number of lectures delivered by the Institute faculty as well as by other eminent workers from outside the Institute. Some of the varied areas covered included problems of research in our universities and in national institutions, the history and ethos of Indian scientific research, Western philosophy of science and the philosophy of Indian thought, gender issues, legal issues involved in secularism and their political misuse, national identity, historiographical and sociological issues, globalisation and development, regional security, conservation of natural resources and pollution, food and agriculture, energy and material resources of our country, the global arms-race, and artificial intelligence. Discussions on the arts focussed on folk traditions in dance and theatre, as well as on cartooning in India. A highlight of the course was the staged reading of **Hardy's Apology**, a short play written by Dr Sundar Sarukkai, by Ordinary People, a theatre group based in NIAS, on February 28.

There were three panel discussions during the course which debated some of the outstanding problems in the areas of terrorism, privatisation of higher education and globalisation respectively. In addition, a tour was arranged to the Indian Space Research Organisation in Bangalore. The recreational tours took the teachers around Bangalore and to the historic temples of Sravanabelgola, Belur and Halebidu.

The course was very well-received and appeared to have met some of its principal objectives. This is attested to by the extremely positive comments that the participants presented during their evaluation of the course, both anonymously and otherwise. It seemed to have had an impact not only on their academic lives, but perhaps more important, on their personal lives as well. In the words of one participant, "...we have been able to enrich ourselves and now look forward to improve the lives of those around us...".

We recognise that the financial support to the course given by the UGC, ISRO and JNCASR has played a key role in bringing more participants from different parts of the country to attend this meeting as well as improving the overall quality of the course by drawing distinguished speakers to address the participants. The support was also instrumental in extending participation to a greater number of college teachers from the north-eastern states.

Anindya Sinha and B K Anitha

ASIAN DIALOGUE SOCIETY – NIAS MEETING

February 12

The International Strategic and Security Studies Programme at NIAS hosted a dialogue with the members of the Asian Dialogue Society (ADS) in February. The ADS is an informal group of people from different Asian / ASEAN countries with a common interest in studying emerging issues that

affect political and economic developments, particularly in Asia. They have a special interest in issues related to peace and conflict especially as they affect Asia.



The central theme of this informal exchange concerned the impact that ASEAN-India cooperation could have on the emerging security scenario in Asia. Prof Zakaria Ahmed and Prof Amitav Acharya made presentations on the behalf of ADS. Admiral Jacob and Arvind Kumar made presentations that represented the Indian viewpoint. The presentations were followed by discussions and exchange of views on different aspects of cooperation and their implications for the security of the Asian region.

It was also recognised that increasing trade and economic interdependence between various countries in Asia, especially between India and the ASEAN countries, could promote peace and stability in Asia.

Arvind Kumar and S Chandrashekar

MEETING WITH MEMBERS OF PARLIAMENT FROM FINLAND – COMMITTEE FOR THE FUTURE

February 26

A delegation of Members of Parliament of EDUSKUNTA – the Parliament of Finland visited NIAS in February. These MPs representing different political parties in Finland belonged to a Finnish Parliament Committee called the "The Committee for the Future". The purpose of their visit was to gain some understanding of the future of India – China relationships and to gain some understanding of how India viewed China.

Arvind Kumar and S Chandrashekar



Associates' Programme

The Institute maintains a strong outreach with its Associates Programme, organised by P K Shetty. The Associates of the Institute include prominent personalities from widely different backgrounds in the media, arts, policy-making and academia. Associates are invited to a monthly evening lecture series and other important events, and constitute a strong base of ongoing outside support and interactions for the Institute.

The Associates' Programme during the period from October 2004 to March 2005 included the following events:

November 16

Technology of obsolescence

J P S Uberoi

Department of Sociology

University of Delhi, New Delhi

This lecture was the Fifth M N Srinivas Memorial Lecture, sponsored by the Syndicate Bank in memory of the late Prof M N Srinivas, eminent social anthropologist and professor at IAS.

January 27

Human space flight today and future perspectives

Claude Nicollier

Golden Jubilee Distinguished Professor Raman
Research Institute, Bangalore

February 7

Global warming – the science of climate change: the imperatives for action

David King

Chief Scientific Advisor to the UK Government,
London, UK

This talk focussed on what is being done globally to assess risk and mitigate climate change, the impact that various UK government-led initiatives hope to have, and how these efforts contribute to larger efforts in climate change mitigation, clean energy and capacity building.





Lectures and Seminars

WEDNESDAY DISCUSSION MEETINGS

*The members of the Institute meet every Wednesday morning for informal academic discussions after a talk delivered by a member of the faculty. These Wednesday meetings, organised by **Sangeetha Menon**, also serve as a forum for invited guest speakers to deliver a special lecture on a subject of their choice. The discussions then continue over the high tea that follow these talks!*

The Wednesday Discussion Meetings during the period from October 2004 to March 2005 have included:

October 20

Technology priorities for India: An economic perspective

S Chandrashekhara

November 3

Ethical issues in psychotherapy

R L Kapur

November 10

Neighbours in distress: Wildlife conservation in India and Sri Lanka

Sindhu Radhakrishna

December 1

Managing teachers' discomforts from the perspective of *Vipassana* meditation

N Ramkumar

December 8

A digital surgical flap planner project

Tim Poston



December 15

Decision-making in rural development NGOs
– A case study on AWARE (Action for Welfare
and Awakening in Rural Environment)

Sarita Seshagiri

January 5

Water: Perspectives, issues and concerns

N Shantha Mohan

January 19

Monkeys of the deep forest: Discovery of a
primate in Arunachal Pradesh

Anindya Sinha

February 2

Insecurities in food security

P K Shetty

February 9

Learning the Baiga way: A study of three
pedagogic sites

Padma M Sarangapani

March 16

A brief history of the Periodic Table and its
variants

S Ranganathan

March 23

Producing the global IT professional

Carol Upadhya

Special lectures

October 6

Social institutions in development strategy

Vijay Padaki

The P & P Group, Bangalore

*While the field of Organizational
Development (OD) has some facility for*

strengthening a single group or organization, most (if not all) development interventions require effective collaborative processes across several groups, organizations, stakeholders. The term Institutional Development (ID) refers to the emerging body of theory-methodology for strengthening such organizational collectives.

December 13

Calls in the twilight: Behavioural ecology and conservation of hoolock gibbons in northeastern India

Jayanta Das

Wildlife Areas Development and Welfare Trust,
Guwahati

January 12

Positive ageing

Felicia Huppert

Department of Psychiatry
Cambridge University
Cambridge, UK

Researchers have long operated on the assumption that by studying disorder we would understand effective functioning. However, there is a growing recognition that subjective well-being, good health and successful and adaptive behaviour cannot be understood simply in terms of the absence of disorder. A major conceptual shift is required to develop a science of positive ageing and its determinants across the life-course.

This lecture reviewed recent work in progress that aims to identify the determinants of positive ageing. The factors associated with subjective psychological well-being, maintained cognitive function, physical health and survival were reviewed, along with an examination of the role of social and biological factors as causes, consequences and mediators of positive outcomes.



Further advances in the research and promotion of positive ageing require a multi-faceted approach which should include: knowledge about how to protect the brain as well as the body from age-related changes, recognition of the importance of psychological well-being and positive social relationships, and analysis of the association between ageing and the external environment.

March 30

Tata's partner Kahandas, and the friendship of Premchand

Asiya Siddiqi

Historian

Bangalore

The commercial economy of preindustrial India was one of the most developed for its times. Did rising entrepreneurs such as Jamsetji Tata draw on its resources? Tata's biographers ignore the question. The speaker drew attention to it by examining the career of Kahandas Narandas of Ahmedabad.

Discussion meeting

January 10

Popularizing the history of Indian science: A talk and discussion about science and education

Helaine Selin

Science Librarian

Hampshire College

Amherst, USA

This meeting served as an informal session in which detailed discussions were held on the work of the speaker in the field of non-Western science.

SEMINAR ON THE HISTORY OF IDEAS

NIAS and Raman Research Institute (RRI), Bangalore, have been organising a monthly

Seminar on the History of Ideas, meeting usually on the second Friday of every month in NIAS. The organising committee consists of K Kasturirangan, R Narasimha, N Kumar, S Settar, M G Narasimhan and M B Rajani (Coordinators). There was three talks and two play-readings in this series, held during the period from October 2004 to March 2005:

October 21

The idea of seeing

Tim Poston

Sir Ashutosh Mukherjee Chair

NIAS

One of our simplest-seeming actions is to see: eyes have evolved on Earth about seventeen separate times. But what do we do when we see? Understanding this is fascinating in itself.

"What do we do when we see?" seems to have inspired theorists as early as the stars did, and with answers as richly various. Do we reach out to see, or is it all about light coming inward? Plato and early Indian writings liked 'outward'. Aristotle liked 'inward', but 'outward' ruled for more than half of history since then. The last millenium, ever more physicalist, has preferred 'inward', but does that settle it? Without disputing the physics, or postulating a Platonic fluid reaching out of the eyes, it seems that we project ideas into the outer world even if we do not project Stuff that can be detected out there.

If we truly understood seeing, we would be much closer to understanding the workings of the mind.

November 26

The lamp at midnight

Bangalore Little Theatre

Bangalore

This play-reading was part of a collaborative project recently formalised between NIAS and Bangalore Little Theatre within the History of



Ideas Programme. The objective of the project is to include dramatic presentations in the programme and thereby reach a larger public. It could be in any form – unrehearsed readings, staged readings, full productions, workshops around scripts, and so on. The project is also planning to develop new playscripts on Indian scientists based on the research at NIAS – for example, on Aryabhata and JC Bose.

This particular play is written by the veteran American writer Barrie Stavis. First produced in 1983 it went on to become a successful performance on TV. The play maintained a focus on two levels of conflict and their interplay – the first between the institutions of science and religion and the second within the psychological make up of the individual scientist who happens to be also deeply religious. Based on factual historical material, the play examined the circumstances behind the recantation by Galileo of his famed hypothesis. The contemporary relevance of Galileo's conflict was evident in the script.

February 8

An earthly tree, a heavenly fruit

John R Marr

Bharatiya Vidya Bhavan

London, UK

The idea of the sanctity of the tree, as exemplified by William Byrd's (1543-1623) Christmas music, can be found in many cultures over many millennia.

The Indian tradition from Harappan times on bears witness to this idea at many points. Not only is the tree itself divine, but Deity is indwelling within its trunk and the sthala-vrksha testifies to this heavenly connection. At the same time the pillar may be regarded as the analogue of the tree, and its treatment from Gupta times on reveals this.

The skill of the sculptor in masterly depiction of Movement technically is illustrated by carved monolithic panels at Aihole and Mamallapuram. But there is a further and conceptual development of Movement that paradoxically involves the pillar, which becomes a Theophany as it splits. The idea of the immanence of the image as latent in a block of stone receives fresh impetus.

February 21

Einstein's dreams

Bangalore Little Theatre

Bangalore

This novel, by Alan Lightman, weaves together Einstein's daydreams while he was at the Patent Office as a clerk along with snippets from his personal life. It is known that Einstein often went alone to the office, much earlier than others, to be by himself. The daydreams, perhaps an escape, came naturally and were often fantasies around the nature of time. He wrote too. A typist at the office sometimes helped in transcribing his handwritten notes into a manuscript for submission.

March 29

The happening of the stars: Part II

Black holes

G Srinivasan

ISRO Satellite Centre

Bangalore

The idea that the Universe may contain countless number of stars from which light cannot escape first emerged towards the end of the eighteenth century. But they were harmless objects. The notion that if a star is compressed sufficiently no radiation can escape from it reappeared in the General Theory of Relativity formulated by Einstein in 1915. This time, however, the consequences were mind boggling. Sir Arthur Eddington was perhaps the first person to appreciate the full significance of this. As was discussed in Part I of this lecture,

this is what led him to reject the extraordinary discovery made by Chandrasekhar. Interestingly, Einstein himself firmly rejected the idea of black holes.



The first observational evidence for the existence of stellar mass black holes came in 1971 with the advent of x-ray astronomy. During the last decade there is growing evidence that giant black holes reside at the centres of most galaxies. On the theoretical side, great progress has been made during the last four decades. In particular, it appears that black holes hold the key to the construction of a quantum theory of gravity.

SPECIAL PROGRAMMES

Five public lectures, a concert and a play were organised at the Institute during the period from October 2004 to March 2005.

Public concert

November 23

Sitar concert

Shafique Khan and Rafique Khan

Public lectures

November 24

Civil society in India and China

Peter van der Veer

University of Utrecht

Utrecht, Netherlands

December 22

Space and time: From antiquity to Einstein and beyond

Abhay Ashtekar

Institute for Gravitational Physics and Geometry

Pennsylvania State University

University Park, USA

Every civilization has been fascinated by the question of what time is and by the issues of the Beginning and the End. Early thinkers including Lao Tsu and Aristotle wrote extensively on the subject and every mythology contains 'explanations' of how the universe was created. But it was only with Newton that mathematically precise ideas emerged. They triumphed for over two centuries.

Yet, these notions too underwent a revolutionary change. In the early part of the twentieth century, Einstein's relativity theories showed that our understanding of space and time was deeply flawed. Time is not absolute as Newton assumed. It fuses with space to form the space-time continuum. Furthermore, space-time is not a back-drop or an inert stage on which the drama of evolution unfolds. Rather, it is a physical entity; it can be acted upon and it reacts, leading to fascinating consequences. But during the latter part of the twentieth century, physicists realized that Einstein's notions also have limitations because they ignore quantum physics.

January 13

A journey from the centre of the Earth

Herbert E Huppert

Institute of Theoretical Physics

University of Cambridge

Cambridge, UK

This lecture served as a guided tour through the planet Earth, starting at the intensely hot, dense Centre. The tour wandered through the solid inner core of the Earth, the liquid outer core, which is in continuous vigorous motion, thereby maintaining the magnetic field of the Earth, and then through the mantle, where minerals, coal and oil were laid down for our use. As the tour progressed, the most important processes that occurred in the oceans and atmospheres were also pointed out.

February 10

Technology and cooperative approaches to regional security

Kent L Biringer and Michael G Vannoni

Cooperative Monitoring Center (CMC)

Sandia National Laboratories

Albuquerque, USA

These talks highlighted the cooperative monitoring concept and examples of technical approaches to addressing regional security concerns. Cooperative monitoring is the process of obtaining and sharing agreed information among parties using technologies and data gathering methods that are acceptable to all parties. Cooperative monitoring is applicable to confidence building as well as verification of various security related agreements. Both the speakers highlighted how the CMC at Sandia National Laboratories assists political and technical experts from around the world to acquire the technology-based tools they need to assess, design, analyse, and implement non-proliferation, arms control, and other cooperative security measures.

February 11

Globalization, development and the mobility of technical talent: India and Japan in comparative perspectives

Anthony P D'Costa

Comparative International Development

Interdisciplinary Arts and Sciences Program

University of Washington, USA

The objective of this talk was to understand how the mobility of technical talent might be changing the structural relationship between rich and poor countries. It examined the under-researched relationship between India and Japan in the context of globalization, migration, and developmental impact with demographic, immigration, and innovation policy issues as key themes. By focusing on the export of technical talent, the speaker



argued that India could tap its overseas "brain bank" by diversifying IT export markets, create epistemic networks, meet impending skill shortages in Japan, and induce long-term innovative capability.

February 28

Hardy's Apology - A Play

Script and Direction by Sundar Sarukkai

Presented by Ordinary People, NIAS

It is said that in January or February 1918, Srinivasa Ramanujan apparently attempted suicide by throwing himself in front of a train in the London Underground. Although the exact reasons for this are not known, it is often said that Ramanujan's depression drove him to this step. What is known, however, is Hardy's story of rescuing Ramanujan from the police station where he was taken to after his attempted suicide. What really transpired between Hardy and Ramanujan after this event? Also, what were the reactions from Ramanujan's family to this incident?

There is also a story that Ramanujan once drank a cup of Ovaltine and after drinking it discovered that it had animal products. Disturbed by this, he ran out and as he neared a railway station there was an air raid in which many people died. Ramanujan is said to have interpreted this as God's punishment to him for having consumed a non-vegetarian product.

In early 1947 Hardy tried to kill himself.

CONSCIOUSNESS DISCUSSION FORUM



During the period from October 2004 to March 2005, the Forum has organised the following discussion meeting.

11 March

"Intention-imprinted Electrical Device"
(IIED) Experiments of William Tiller: 2 A brief
introduction

M Srinivasan

Former Associate Director, Physics Group,
BARC, Mumbai
Chennai

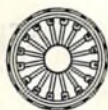
NIAS LITERARY FORUM

There was one meeting of the Forum during the
period from October 2004 to March 2005.

December 29

Play-reading

Sharada Srinivasan and Sangeetha Menon



Meetings Attended and Lectures Delivered by NIAS Faculty

OCTOBER 2004 TO MARCH 2005

Dilip Ahuja

Attended a briefing for Indian authors participating in Working Group III of the Intergovernmental Panel on Climate Change by the Ministry of Environment and Forests, at the Energy and Resources Institute, New Delhi, October 15

Participated in the First Lead Authors' Meeting, Working Group III, Intergovernmental Panel on Climate Change for the IPCC Fourth Assessment Report, Brehna, Germany, October 19-21

Presented the methodology for the evaluation of the Edusat-VTU Pilot Phase project (along with Dr A R Vasavi and Mr D Venugopal) at the Development and Educational Communication Unit, Indian Space Research Organisation, Ahmedabad, December 30

Attended the Fifth Annual Board Meeting of the Inter Academy Council, Royal Dutch Academy of Arts and Sciences, Amsterdam, The Netherlands, January 31-February 2

Attended the Workshop on Strategy and Mechanisms for Implementation for the IAC Report on 'Inventing a Better Future: A Strategy for Building Worldwide Capacities in Science and Technology', Royal Dutch Academy of Arts and Sciences, Amsterdam, The Netherlands, February 3-4

Presented a paper on "Evaluation of the programme for senior scientists at the Review Meeting of the National Training Programme for Scientists and Technologists, Jaipur, February 6

Served as the discussant for the paper on Policy Needs for Assessment of Integration of



Adaptation, Mitigation, and Sustainable Development by Janos Pasztor, at the IPCC WG II-III Expert Meeting on Adaptation-Mitigation and Sustainable Development, St Denis, La Reunion, February 16-18

Delivered a talk on "Mendacity in our midst", The Nightingales Elders' Enrichment Centre, Bangalore, March 18

B K Anitha

Delivered a talk on "Economic implications of gender" to undergraduate students of Mount Carmel College, as part of their on-going programme of introducing graduate students to interdisciplinary thinking, Bangalore, October 23

Delivered a talk as a panelist on the theme "The future of humanities: Extinction or reinvention" as part of a two-day Humanities Fest Fast Forward Humanities Tomorrow, Mount Carmel College, Bangalore, January 18

Delivered a lecture on "Gender, education and occupation" at the Eighth NIAS Course on An Integrated Approach to Knowledge and Information for University and College Teachers, NIAS, February 15

Presented a paper on "Institutional mechanisms to counter violence against women" at the National Workshop on Social Science: Dialogue with Research, Teaching, Activism and Policy, Madras Institute of Development Studies, Chennai, February 17-18

Delivered a talk on "Preventive and remedial measures on sexual harassment at the work place" at the National Seminar on Sexual Harassment and Gender Justice for Senior Government and Bank Officers, Bangalore, February 25

Delivered a lecture on "Gender and development" at the Foundation Course, NIAS Doctoral Programme, NIAS, March 15

S Balachandra Rao

Conducted a two-day Workshop on Indian Mathematics and Astronomy, Bharatiya Vidya Bhavan, Bangalore, October 15-16

Conducted an inter-collegiate Interface on Indian Scientific Heritage and delivered a lecture on "Classical astronomy of India", Surana College, Bangalore, January 16-17

Attended the National Seminar on *Pançanga* and presented a paper on "Computational efficacy of *Grahalaghavam* and Chandrashekhara Samanta's *Siddhanta Darpana*", Rashtriya Sanskrit Vidyapeetha, Tirupati, January 28-30

H K Anasuya Devi

Delivered a lecture on "Computational methods for script identification" at the Eighth NIAS Course on An Integrated Approach to Knowledge and Information for University and College Teachers, NIAS, February 21

Delivered a lecture on "Object recognition" as part of the ISTE Short Term Training Programme on Recent Advances in Image Processing and its Applications in Engineering, Dr Ambedkar Institute of Technology, Jnana Bharathi Campus, Bangalore, March 2

Participated in the National Conference on Image Processing, NIAS, Bangalore, March 22-25

Participated in the Thirty-first Meeting of the Epigraphical Society of India and presented three papers entitled "A framework for optical character recognition of the Brahmi script", "Thinning: A preprocessing technique for an OCR system for Brahmi script" and "Thresholding: A pixel-level image processing methodology for an OCR system for Brahmi script", Mysore, March 25-27

R L Kapur



Conducted a Workshop on Mental Health Care in Modern India, delivered a Keynote Address on "Psychotherapy and counselling" and chaired a session on Promoting Guidance and Counselling for Quality of Life at the International Conference on Applied and Community Psychology: Trends and Directions, Gurukul Kangri University, Haridwar, February 26-28

Delivered a talk on "My growth and development as a psychiatrist", Andhra Psychiatrist Society, Hyderabad, March 10

Invited by the Ministry of Human Resources Development, Government of India, to attend a meeting to discuss issues pertaining to examination stress on present-day students, New Delhi, March 24

K Kasturirangan

Attended the 55th International Astronautical Congress (IAF) and IAA meetings held at Vancouver, Canada, October 2-9

Delivered the J C Bose Memorial Lecture on "Evolution of a space science mission – some interesting aspects" at the IETE, New Delhi, November 20

Delivered the inaugural address at the 11th International Conference on Neural Information Processing at the Indian Statistical Institute, Kolkata, November 22

Delivered the Founder's Day talk on "My years as Chairman, ISRO" at the Physical Research Laboratory, Ahmedabad, November 30

Delivered the Prof M N Saha Memorial Lecture on "The emerging era of space science in India" at the 74th Annual Session of the National Academy of Sciences, India, Jaipur, December 4

Delivered the Special Address on "Perspectives of the Indian Space Programme" at the National Seminar of Centre for Air Power Studies, New Delhi, December 9

Delivered an Oration on "A new space-based observatory to explore the universe" at the Annual Convention of the Indian National Academy of Engineering, New Delhi, December 11

Delivered the J C Bose Memorial Lecture on "Space science in India – two recent initiatives" at the Royal Society of London (jointly instituted by the Royal Society, London and Indian National Academy of Engineering, New Delhi), New Delhi, December 14

Delivered the keynote address during the COSPAR Colloquium, Tata Institute of Fundamental Research, Mumbai, January 17

Delivered a talk on "Managing India's space programme" at the 19th NIAS Course on Excellence in Leadership for Senior Executives, NIAS, January 27

Delivered the Inaugural Address at the International Conference on Solid State Hydrogen Storage, Hyderabad, January 31

Delivered the V K Krishna Menon Memorial Lecture on "Science, technology, environment and social change in the context of Kerala" at Bodhananda Research Foundation, Trivandrum, February 5

Delivered the inaugural lecture on "India's space programme – the challenges ahead" at the Eighth NIAS Course on An Integrated Approach to Knowledge and Information for University and College Teachers, NIAS, February 10

Delivered the keynote address at the 11th International Conference and Exhibition on Terrestrial and Satellite Broadcasting, organised by the Broadcast Engineering Society, New Delhi, February 19



Delivered a talk on "Law and ethical issues in space" at the Judicial Colloquium on Science, Law and Ethics, organised by National Judicial Academy, Bhopal, February 20

Attended the International Academy of Astronautics (IAA) meetings as Vice-President (Scientific Activities), Paris, France, March 21-25

Arvind Kumar

Made a presentation on "Understanding Indian nuclear doctrine" at the CIIS - NIAS Dialogue, NIAS, November 15

Delivered seven lectures on "International relations theories on deterrence", "Deterrence in the subcontinent", "Strategy and technological choices in southern Asia", "Indian nuclear doctrine", "Nature and significance of contemporary warfare", "Dynamics of warfare" and "Indo-US relations" at the Post-Graduate Department of International Studies, Stella Maris College, Chennai, November 23-26

Attended the National Seminar on Comprehensive Security Issues and Challenges: An Indian Perspective and presented a paper on "Nuclear strategy in an asymmetric equation", Stella Maris College, Chennai, January 6-7

Delivered a guest lecture on "International relations theories on deterrence", Department of Politics and International Studies, Pondicherry University, Pondicherry, January 31

Attended the Fifth Aero-India International Conference on Aerospace Technologies, organised by the Defence Research and Development Organisation, Bangalore, February 7-9

Made a presentation entitled "India-ASEAN cooperation: Challenges and prospects" during

the ADS – NIAS Dialogue on Security and Culture, NIAS, February 12

Delivered a talk on "Future of Indo-US relations" at the Eighth NIAS Course on An Integrated Approach to Knowledge and Information for University and College Teachers, NIAS, February 16

Presented a paper entitled "Implications of ballistic missile defence and nuclear weapons for maritime security" at an international conference organised by the Institute of Defence and Strategic Studies, Nanyang Technological University, Singapore, March 8-9

Delivered a lecture on "Future of India-ASEAN cooperation", Institute of Defence and Strategic Studies, Singapore, March 28

Rishi Kumar

Attended the Workshop on Line Transect Methods, Melghat Tiger Reserve, Maharashtra, February 24-March 2

SS Meenakshisundaram

Participated in the Annual Partners Meet – 2005 of the International Water Management Institute – Tata Water Policy Programme and chaired all the three sessions on Issues in Improving Drinking Water Supply, Institute of Rural Management, Anand, February 24-26

Delivered the Inaugural Address at the Training Workshop for Panchayat Members and Officials to assess the role of panchayats in delivery of services, Kerala Institute of Local Administration, Thrissur, March 5

Participated in the Workshop on Social Accountability Initiatives in Asia, organised by the World Bank Institute and the Public Affairs Foundation, and chaired a session on Social Accountability Initiatives from China, Ukraine and Ethiopia, Bangalore, March 21-23

Sangeetha Menon



Delivered a talk on "Healing through love, debate and just being: Instances from Indian traditions" at the National Conference on Indian Psychology, Sri Aurobindo Advanced Studies Centre, Pondicherry, December 9-13

Delivered a lecture on "Is experience the puzzle for consciousness?" at the International Conference on Cognitive Science 2004 (ICCS 2004), Centre for Behavioural and Cognitive Sciences, Allahabad University, Allahabad, December 16-18

Delivered a talk on "Persisting puzzles of consciousness" at the ICPR Panel on Consciousness, University of Agricultural Sciences, Bangalore, January 1

Delivered a lecture on "Two rationalities for one consciousness: Exploring the scientific and mystical mind" at the International Symposium on Science and Mysticism: East-West Dialogue, Indian Institute for Science and Religion, Pune, January 2-6

Delivered a talk on "Grief and hope", Sri Aurobindo Aradhana Trust, Bangalore, January 12

Delivered a lecture on "Mind and consciousness" at the Eighth NIAS Course on An Integrated Approach to Knowledge and Information for University and College Teachers, NIAS, February 14

Delivered a lecture on "How much can we 'talk' about 'mind': Some conceptual puzzles" at the National Seminar on Language and Mind in Classical Indian Philosophical Traditions, University of Hyderabad, March 3-5

N Shantha Mohan

Delivered a lecture on "Gender and empowerment" at the ISRO Conference on

Space Applications for Women's Development,
Space Applications Centre, Ahmedabad,
November 4

Delivered a lecture on "Comprehensive security
and CEDAW", Centre for Security Analysis,
Chennai, November 6

Attended the Regional Consultation on Women's
Right to Participate in Political and Public Life,
presented a paper on "Women's participation in
politics in India" and facilitated the session on
Monitoring State Obligations, Djakarta,
Indonesia, December 9-12

Chaired a panel discussion on Leadership among
Women in India: Corporate, Government and
Civil Society at the 19th NIAS Course on Excellence
in Leadership for Senior Executives, NIAS,
January 28

Participated in the International Conference on
the Role of International Women's Rights Action
Watch in Promoting Women's Human Rights",
organised by IWRAW-Asia Pacific, Kuala Lumpur,
Malaysia, February 25

Delivered a lecture on "Engendering governance"
at the Eighth NIAS Course on An Integrated
Approach to Knowledge and Information for
University and College Teachers, NIAS, March 1

March 15, 2005: Delivered a talk on "Gender and
gender relations" at a meeting on Women's
Initiatives towards Social Harmony in
commemoration of the International Women's Day,
Indian Space Research Organisation, Bangalore,
March 15

Nithin Nagaraj

Attended the Workshop on Discrete Dynamical
Systems, Department of Mathematics, University
of Hyderabad, Hyderabad, January 7-9

S Rajagopal



Delivered a talk entitled "Indian nuclear programme: The road map to success" at the Centre for Airborne Systems, Defence Research and Development Organisation, Bangalore, December 8

S Ranganathan

Attended the Indo-US Workshop on Nanotechnology and presented a paper on "Educational issues in nanotechnology", Indian Institute of Science, Bangalore, August 11-13

Delivered the Golden Jubilee Lecture on "Multilevel and multidimensional beauty in metallurgy", Bhabha Atomic Research Centre, Trombay, September 2

Delivered the CSIR Foundation Day Lecture on "Extreme materials science", Regional Research Laboratory, Bhubaneswar, September 26

Attended the Indo-EU Thematic Workshop on Road Transport Research and Development and delivered a lecture on "Academia-industry interaction and international cooperation: ALTECH as a role model", Indian Institute of Science, November 8-10

Delivered a lecture on "Wootz steel: Metallurgical perspectives" at the J N Tata and J R D Tata Twin Centenary Celebrations, IAS, November 26

Attended the Materials Tetrahedron International Symposium of Research Students on Materials Science and Engineering, Indian Institute of Technology, Chennai, December 20-22

Padma M Sarangapani

Delivered the Concluding Remarks at the Colloquium on Textbooks and Textbook Reform,

organised by Comet Media Foundation as a part of their annual Bal Vividha Programme, Mumbai, December 4

Attended the Meetings of the National Steering Committee for the Review of the National Curriculum Framework, New Delhi, January - March

Sundar Sarukkai

Delivered a talk on "Science and Indian philosophy", Indian Institute of Advanced Study, Shimla, September 3

Attended the Convivium VI - International Meeting of Philosophers, and delivered a talk on "Philosophy and subjectivity", Bir, Himachal Pradesh, September 11

Delivered a talk on "Relevance of Indian philosophy to philosophy of science", Institute of World Culture, Bangalore, September 19

Delivered the keynote address at the National Seminar on Developing Advance Ventures in Translation, M G Antarashtriya Vishwavidyalaya, Wardha, October 27

Delivered a talk on "Logic and science", PHISPC Seminar, New Delhi, November 4

Delivered the International Philosophers Day Lecture on "Philosophical challenges to science", Department of Humanities and Social Sciences, IIT Madras, Chennai, November 18

Delivered a talk on "Philosophical thinking in scientific practice", INSA Seminar on Science and Society, Chennai, December 27

Delivered a Plenary Lecture on "Indian logic and philosophy of science: The logic and epistemology link" at the International Conference on Logic 2005, IIT Bombay, January 9-13



Delivered a talk on "Indian logic and philosophy of science", PHISPC Editorial Enclave Meeting, New Delhi, February 24-26

Sindhu Radhakrishna

Delivered a lecture on "The origin and evolution of the human species" at the Eighth NIAS Course on An Integrated Approach to Knowledge and Information for University and College Teachers, NIAS, February 11

P K Shetty

Delivered a talk on "Harmful effect of chemicals on environment", Lions Club, RT Nagar, Bangalore, October 13

Attended the Pesticide Stewardship Conference, organised by the National Pesticide Stewardship Alliance, and delivered a talk on "Integrated pest management – strategies for sustainability and selfreliance", Orlando, USA, November 7-11

Delivered an invited talk at the National Symposium on Pesticides: Myths, Realities and Remedies, Society of Pesticide Science, New Delhi, December 3-5

Anindya Sinha

Attended the Resource Generation Camp for the Biology Olympiad, Homi Bhabha Centre for Science Education, Mumbai, October 2-8

Delivered a talk on "Other minds: Attribution and intentionality in wild bonnet macaques" at the Department of Biological Sciences, Tata Institute of Fundamental Research, Mumbai, October 5

Delivered a talk on "Are bonnet macaques conscious? The search for an animal mind..." at the Advanced Centre for Treatment, Research and Education in Cancer (ACTREC), Mumbai, October 7

Delivered a lecture on "A beautiful mind: Social cognition in wild bonnet macaques" at the Homi Bhabha Centre for Science Education, Mumbai, October 8

Attended the Refresher Course in Animal Behaviour, organised by the Indian Academy of Sciences, as a resource person and delivered two talks entitled "Other minds: Social and mechanical cognition in wild bonnet macaques" and "The making of a society: Demographic and social evolution in bonnet macaques", Madurai Kamaraj University, Madurai, December 9-10

Attended the International Conference on Cognitive Science 2004 (ICCS 2004) and presented a paper entitled "Other minds: Social cognition in wild bonnet macaques", Centre for Behavioural and Cognitive Sciences, Allahabad University, Allahabad, December 16-18

Delivered two popular lectures for high school students on "Human cloning" and "Animal minds" under the aegis of the Indian National Science Academy – Allahabad Chapter, Allahabad University, Allahabad, December 19

Attended the Resource Generation Camp for the Biology Olympiad, Homi Bhabha Centre for Science Education, Mumbai, January 18

Delivered a lecture on "Speciation in macaques: The discovery of the munzala" at the Bangalore Association for Science Education, Bangalore, January 22

Invited to deliver the Eighth Lecture on "How monkeys see the world: The search for an animal mind..." in the lecture series on "Ideas For All", Chennai Mathematical Institute, Chennai, January 31

Invited to deliver a talk on "The munzala: A new macaque from Arunachal Pradesh, northeastern India", National Centre for Biological Sciences, Bangalore, February 3



Invited to deliver a talk on "Monkeys of the deep forest: The discovery of a new macaque in Arunachal Pradesh", Department of Molecular Reproduction, Development and Genetics, Indian Institute of Science, Bangalore, February 11

Attended the Indo-French Workshop on Neurosciences and presented a paper entitled "Animal minds: Cognition in wild bonnet macaques", National Brain Research Centre, Manesar, February 14-15

Delivered a lecture on "The science and ethics of human cloning" at the Eighth NIAS Course on An Integrated Approach to Knowledge and Information for University and College Teachers, NIAS, February 18

Attended the Annual Research Seminar of the Nature Conservation Foundation and delivered a talk on "Indian macaque tales: Communities, societies and individuals", Mysore, February 24-26

B V Sreekantan

Delivered a lecture on "The scientific contributions of Dr Raja Ramanna" Bangalore Science Forum, Bangalore, November 17

Attended the National Seminar on Project of History of Indian Science, Philosophy and Culture in Indian Civilization and delivered a lecture on "Consciousness and Science", 79th Session of the Indian Philosophical Congress, Madurai, December 16-19

Attended the International Conference on Science, Technology and Mathematics Education (epiSTEME-1), organised by the Homi Bhabha Centre for Science Education and delivered the Inaugural Talk on "Research in Science, Technology and Mathematics Education", Dona Paula, Goa, December 13-17

Delivered a lecture on "Science and consciousness" at a Seminar on B. Ed. Syllabus, Rashtrottthana Parishat, Keshava Shilpa, Bangalore, January 29

Delivered a talk on "Astronomy in India: Opportunities and facilities" at the Eighth NIAS Course on An Integrated Approach to Knowledge and Information for University and College Teachers, NIAS, February 28

Delivered a talk on "India 2020 - A vision for the new millennium" at the National Seminar for Research Scholars on Philosophy, Science and Culture: Visions and Tasks for Future, Gauhati University, Guwahati, March 16-18

Sharada Srinivasan

Attended 'Grass to Gold' - International Seminar on Jewellery Techniques, organised by Crafts Council of India and World Gold Council, Chennai, October 6-9

Attended the National Conference on Archaeology of Early Historic South Asia, and presented a paper on "Early historic metalware from peninsular India", Centre for Archaeological Studies and Training in Eastern India (CASTEI), Kolkata, November 7-9

Attended the Indo-Italian Workshop on Conservation on Metal Artefacts, organised in collaboration with Central Institute for Restoration, Rome, at INTACH Art Conservation Centre, New Delhi, November 16-17

Carol Upadhy

Presented a paper on "Negotiating among sponsored research agendas, academic knowledge, and political movements: One researcher's experience" at the Workshop on Social Science: Dialogue with Research, Teaching, Activism and Policy, Madras Institute of Development Studies, Chennai, February 18-19



Delivered a talk on "Doing research in the global corporate workplace: Problems of method and analysis" at the Workshop on Qualitative Methods in Sociological Research, Department of Sociology, Delhi School of Economics, University of Delhi, March 15-16.

Prabhakar G Vaidya

Delivered a series of ten lectures on Chaotic Synchronization and Cryptography at the First SERC School on Nonlinear Dynamics, Physical Research Laboratory, Ahmedabad, November 28-December 18

Attended the Workshop on Discrete Dynamical Systems and delivered a talk on "Applications of discrete dynamical systems to number theory", Department of Mathematics, University of Hyderabad, Hyderabad, January 7-9

Delivered a talk on "Separating the brain from the heart", Evolutionary and Organismal Biology Unit, Jawaharlal Nehru Centre for Advanced Scientific Research, February 10

Delivered a lecture on "Can mathematics be made easy?" at the Eighth NIAS Course on An Integrated Approach to Knowledge and Information for University and College Teachers, NIAS, February 17

Delivered a talk on "Kalman and other filters", Space Applications Centre, Ahmedabad, February 21

Delivered a lecture on "Applications of mathematical modelling" at the Foundation Course, NIAS Doctoral Programme, NIAS, March 25

A R Vasavi

Presented a paper on "Enhancing quality in elementary district education: Vidyankura Project" at the Asia Education Forum, Bangalore, October 27

VISITS BY THE NIAS FACULTY

Arvind Kumar

Visited the Institute of Defence and Strategic Studies, Nanyang Technological University, Singapore as APISA – IDSS Fellow, March 6-31

S Rajagopal

Visited the Kurchatov Institute in Moscow, Russia, December 19-26

Sharada Srinivasan

Visited various museums and libraries, including the Crafts Museum, National Museum, NISTADS and the Sanskriti Foundation in New Delhi for research work, September 13-20

VISITORS TO NIAS

Dr Bhupendra Jassani of the Department of War Studies, King's College, London, UK, visited NIAS during October 11-15. The National Security Studies Programme organised two events during his stay here. These included a lecture by him on the "Use of commercial satellite imagery for peacekeeping applications" and a workshop on the theme "Organisational and institutional capability building for using commercial satellite imagery for international peacekeeping applications". The participants at both these events included academics, as well as members of the strategic and scientific community.

Dr Ravinder Pal Singh, Senior Research Fellow with the Center for Pacific Asia Studies, Stockholm University, Stockholm, Sweden, visited NIAS on November 10. He interacted with members of the National Security Studies Programme of NIAS during his visit.

Mr Masato Takaoka, Minister (Political) at the Embassy of Japan in New Delhi, visited NIAS and



delivered a talk on "Strategic dimensions: India-Japan relations". The meeting, organised by Prof S Rajagopal, was attended by strategists, analysts and media. During the meeting, which was informative and lively, Mr Takaoka identified some topics as areas of interest; these included the question of whether India and Japan can work together in shaping up the global order, on ways to make Asia safer and secure, and certain regional issues with some focus on south Asia.

Dr Anuradha Reddy, Deputy Director at the Office of Director General, Research and Development, DRDO HQ and Ms Nabanita R. Krishnan visited NIAS on December 22. During their visit, they held discussions on security issues for future collaborative research work with the members of the National Security Studies Programme of NIAS. The subjects that came up for discussion included security issues in south Asia, south-east Asia and the Indian Ocean.



Upcoming Events

The Fifth NIAS Course on **Disaster Management for Senior-level IAS Officers** will be organised at the Institute, tentatively from May 29 to June 4, 2005. For more information, please contact N Shantha Mohan (shantham@nias.iisc.ernet.in).

The Second DST-NIAS Programme on **Multi-disciplinary Perspectives on Science and Technology** will be organised in NIAS from July 24 to August 6, 2005. For more information, please contact Dilip Ahuja (dahuja@nias.iisc.ernet.in).

The International Conference on **New Global Workforces and Virtual Workplaces: Connections, Culture and Control** will be organised in NIAS on August 12-13, 2005. The conference, funded by the Indo-Dutch Programme on Alternatives in Development, aims to bring together scholars from different countries (especially in Asia) who are engaged in research on new forms of work and categories of global workers that are emerging in the 'new economy', especially in the information technology (IT) and IT-enabled services (ITES) sectors. The organisers invite papers that are based on original research and that fall into any of the following sub-themes, or which raise related issues including sourcing and social structuring of the new global workforce; corporate culture in the new global workplace; work culture and the work process; skills, deskilling and threat of obsolescence; disciplinary regimes and resistance; work, culture and identity; mobility and social security; ancillary services for the processing of 'new economy' workers; class, consumption and urban social transformations; nations, borders and cross-border flows. Those interested in attending the conference may please write to Carol Upadhyia (carol@nias.iisc.ernet.in) or check the NIAS website.



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Indian Institute of World Culture, Bangalore

Malavika Kapur, Honorary Professor
Bangalore

S Balachandra Rao, Honorary Senior Fellow
Bangalore

PRINCIPAL S R GROVER LIBRARY

Hamsa Kalyani (MLISc Bangalore)
Assistant Librarian
niaslib@nias.iisc.ernet.in

The National Institute of Advanced Studies (NIAS) was conceived and initiated by the late Mr. J R D Tata, who sought to create an institution which would conduct advanced research in multidisciplinary areas, and also serve as a forum to bring together administrators and managers from industry and government, leaders in public affairs, eminent individuals in different walks of life, and the academic community in the natural and social sciences. The intention has thus been to nurture a broad base of scholars, managers and leaders who may contribute to tackling the complex problems facing contemporary India in a more informed and effective manner.

The philosophy underlying NIAS is given shape by its research teams, which are drawn from a variety of disciplines in the natural and social sciences. The Institute is unique in its integrated approach to the study of intersections between science and technology and social issues.

Sangeetha Menon



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